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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/977,746
Filing Date: October 15, 2001
Appellant(s): MALLIS ET AL.

Jeffrey S. Bergman
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/15/06 appealing from the Office action mailed 12/27/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 10-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to

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comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In claim 10, lines 9-10 state that “irreversible plastic deformation of the positive stop torque shoulder does not occur upon final makeup”.

This appears to be inconsistent the specification as originally filed which on page 6, lines 1-2 state that torque “may be applied to the positive stop torque shoulder prior to final make up, without causing irreversible plastic deformation”. Thus, the claims purport that no irreversible plastic deformation occurs at final makeup yet the specification only supports no irreversible plastic deformation prior to final make up.

B. Claims 10, 11, 15, 16, 17, 18 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 5,462,315 to Klementich.

As to claims 10 and 19, The Klementich patent illustrates, for example in figs. 4A-4C and column 21, lines 5-22, a method of coupling threads pipes which includes rotationally engaging a pin member 402 and a box member 406, the pin member 402 having an external thread 416 increasing in width in one direction, the external thread 416 comprising load and stab flanks, the box member 406 having an internal thread 428 increasing in width in the other direction, the internal thread 428 comprising load and stab flanks, the pin member and box member defining a positive stop torque shoulder 408, 419 wherein the widths of the external thread and the internal thread are selected such that upon final makeup (column 21, lines 5-6 and line 18) of the connection a selected clearance (column 21, lines 20-21) exists between the external thread and internal thread.

As to claim 11, see the positive stop torque shoulder 408 is disposed at an interface of a box face disposed on the box member and a pin outer diameter shoulder 419 disposed on the pin member.

As to claim 15, the two-step configuration (fig. 4C) of the internal thread of the box member and the two-step configuration (fig. 4B) of the external thread of the pin member and the positive stop torque shoulder 408, 419 disposed at an interface between the two steps of the pin and box members.

As to claim 16 see column 22, lines 50-51 wherein the internal and external threads are adapted to form a metal-to-metal seal.

As to claims 17 and 18 see figures 6A, 6B and 8B which illustrate a tapered, internal, generally dovetail-shaped thread having stab flanks, load flanks, roots, and crests of the box and pin members.

C. Claims 12,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,462,315 to Klementich in view of U.S. patent 4,822,081 to Blose. Klementich discloses the claimed device of a threaded pipe connection as noted above including a pin member 114 having an external thread increasing in width in one direction, the external thread comprising load and stab flanks and a box member 116 having an internal thread increasing in width in the other direction so that complementary internal and external threads move into engagement upon make-up of the connection, the internal thread comprising load and stab flanks and wherein the width of the internal thread and external thread are selected to provide a selected clearance (column 21, lines 15-20) at least between the stab upon final makeup of the connection. Further the thread of Klementich is shown to be a two-step configuration (see figs. 2A-2C for example). However Klementich does not disclose using a positive stop shoulder at

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either end of the box and pin members. Blose discloses that it is known in the art to provide a similar type coupling with a positive torque shoulder at 41/42, 43, 44 or between the threads as disclosed in column 5, lines 25-30. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the threaded box and pin members of Klementich with positive torque stop shoulders at either end as taught by Blose in order to provide a more secure coupling for the threaded members due to the shoulders assisting the stab flanks of the threaded members in resisting applied axial compressive loads.

(10) Response to Argument

Appellant asserts that claims 10 and 19 are independent claims and also asserts that claims 10-19 stand or fall together for the purpose of this appeal. The Examiner wishes to note that claim 19 is not an independent claim, as claim 19 depends from claim 10.

Appellant argues that claims 10-19 are not indefinite under 35 U.S.C. § 112, first paragraph. Specifically, the Appellant asserts that not having plastic deformation of the positive stop torque shoulder occur “upon final makeup” as recited in claim 10, is equivalent to not having plastic deformation occur “prior to final make up” (see specification, pages 5-6, ¶ 26). The Examiner disagrees, as the words “upon” and “prior to” are not synonymous. In the Appellant’s response, dated 9/29/05, Appellant uses the example of 5000 ft*lbs being “upon” and 4999 ft*lbs being “prior to”, and that it would not be possible to have plastic deformation at 5000 ft*lbs if there was no plastic deformation at 4999 ft*lbs. It is unclear to the Examiner why plastic deformation couldn’t occur at 5000 ft*lbs when there was no plastic deformation at 4999 ft*lbs. There has to be a threshold pressure value when plastic deformation of the metal begins to occur, and there is no reason it could not be when the last ft*lb of pressure is added “upon” final make up of the joint.

Appellant also asserts that the specification's description of avoiding plastic deformation prior to final makeup is sufficient for one skilled in the art to conclude that no plastic deformation would occur upon final makeup. The Examiner disagrees with this assertion. There is no reason for one of ordinary skill in the art to assume that when torque may be applied to the positive stop torque shoulder prior to final make up, without causing irreversible plastic deformation, that no plastic deformation would not occur upon final makeup. The same example of 4999 vs. 5000 ft*lbs used above applies here as well. It may be that last ft*lb of pressure applied "upon" final makeup which causes the metal to plastically deform.

The Appellant again asserts that one of ordinary skill in the art would understand that avoiding plastic deformation up to final makeup is inherent in any connection avoiding plastic deformation prior to final makeup. However, the Appellant provides no further evidence to support this assertion.

Appellant asserts that reciting a lack of plastic deformation upon final makeup is clearer to those attempting to discern the scope of the present invention in claim 10. However, amending claim 10 to include the phrase "upon" final makeup changed the scope of the invention from the scope of the invention as originally filed because "prior" and "upon" are not equivalents.

Appellant refers to the case of *Shatterproof Glass* 758 F.2d 624 and its analysis of indefiniteness, which requires that the claims, when read in view of the specification, must be consistent with the originally filed specification. In this case, amended claim 10 is clearly not consistent with the originally filed specification. The use of the word "upon" is not consistent with the use of the word "prior", as the two words are not equivalents.

As the word “upon” and “prior” are not consistent with one another and there is no reason to believe that one of ordinary skill in the art would assume that because no plastic deformation occurs prior to final makeup that it could not occur upon final makeup, the Examiner requests that the Board maintain the 35 U.S.C. § 112, first paragraph rejection.

Applicant argues that the rejection of claims 10-11 and 15-19 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 5,462,315 to Klementich is improper because Klementich does not disclose the avoidance of plastic deformation in a positive stop torque shoulder of a threaded connection upon final makeup of the pipe connection. The Examiner disagrees and asserts that Klementich discloses every positive action method step recited in claim 10 and 19.

The only positive method step recited in claim 10 is “rotationally engaging a pin member and a box member”. Klementich clearly anticipates this step as figs. 1A and 2A disclose a threaded pin member engaging an box member. All other recited limitations in claims 10-18 are structural limitations, which carry little patentable weight in the method claim, as they have no affect on the method step being positively recited. Therefore, Klementich fully anticipates the method steps of method claims 10-19.

Claim 19 recites a “connection” according to the method of claim 10. Again, Klementich discloses a ‘connection’ between the threads of the pin and box members.

However, even if you were to give patentable weight to the phrase “wherein a torque is applied such that plastic deformation of the positive stop torque shoulder does not occur upon final makeup”, Klementich would still anticipate the claim, as Klementich is silent as to any type of plastic deformation occurring during the makeup of the connection (see page 11 of Appellant’s Brief). Klementich does disclose that shoulders 520 and 540 “bend slightly” upon makeup (see column 22, lines 35-41), but Klementich does not disclose if that bending causes an

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elastic or plastic deformation of the shoulders 520 and 540. It would be improper to conclude that there is any plastic deformation in the disclosed connection of Klementich when there is no description of plastic deformation occurring in the Klementich patent.

Appellant surmises that plastic deformation must occur in the Klementich patent because of a final power tightening that occurs after the makeup of the shoulders 520 and 540. However, once again Klementich is silent as to any type of plastic deformation occurring in the threaded connection. The slight bending of the shoulders mentioned in Klementich (col. 22, lines 34-38) could very well be within the elastic deformation range of the material. Therefore, Appellant's assertion that plastic deformation occurs in Klementich is complete conjecture. There is not enough evidence or support in the specification of Klementich to allow one of ordinary skill in the art to conclude that plastic deformation occurs during the makeup of the threaded joint.

Appellant asserts that it has been discovered that avoiding plastic deformation of the positive stop torque shoulder increases the life of the connection without a significant loss in performance. The Examiner proposes that maybe Klementich was aware of this discovery as the torque shoulder of Klementich is not disclosed as being plastically formed during makeup of the connection.

Applicant argues that the rejection of claims 12-14 under 35 U.S.C. § 103(a) is improper because Blose teaches away from the present invention and does not show or suggest the avoidance of plastic deformation of the positive stop torque shoulders upon final makeup of the connection. However, Blose was not used to teach the avoidance of plastic deformation of the positive stop torque shoulders 520 and 540 of Klementich, as Klementich does not disclose that these shoulders are plastically deformed. Blose was used to teach the use of pin and box

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positive stop shoulders at the pin and box ends similar to the areas labeled 24 and 28 in Appellant's fig. 3, , therefore the obvious type rejection has been maintained.

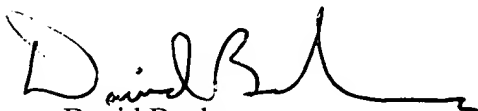
In summary, Klementich fully anticipates the method steps recited in claims 10-18, as there is only one method step positively recited, "rotationally engaging a pin member and a box member". Klementich also anticipates the structural limitation of claim 19, "a connection". The structural recitations in claims 10-18 do not further limit or further define the method being claimed in the present application. However, if one were to give patentable weight to the structural elements being recited in claim 10, they would also be anticipated by Klementich, as Klementich is silent to the occurrence of plastic deformation in the threaded connection.

(11) Related Proceeding(s) Appendix


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


David Bochna

Conferees:

Daniel Stodola 

Aaron Dunwoody 